



Docket No.: IMMR-115A

THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Alex S. Goldenberg et al.
SERIAL NO.: 09/927,416
FILING DATE: August 10, 2001
TITLE: Actuator Thermal Protection in Haptic Feedback Devices
EXAMINER: Younghuie Jessica Han
ART UNIT: 2838

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as First Class
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INFORMATION DISCLOSURE STATEMENT

Each item of information listed in the attached FORM PTO-1449, for which a copy of each is attached (unless the blanket waiver referred to below applies), may be material to the examination of the above-identified application and is, therefore, submitted in compliance with the duty of disclosure defined in 37 CFR §§ 1.56, 1.97 and 1.98. The Examiner is requested to review, consider and document each such item in the official record of this application.

Note: If this box ☐ is checked, this case was filed after June 30, 2003 and qualifies for the blanket waiver of deposit of copies of U.S. Patents and U.S. Patent Application

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Publications in accordance with the written waiver of 37 CFR §1.98 (a)(2)(i) dated July 11, 2003. Accordingly, such copies are not attached.

This Information Disclosure Statement under 37 CFR §§ 1.56, 1.97 and 1.98 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these items constitutes prior art.

I

This statement is filed pursuant to (CHECK ONE BOX):



37 C.F.R. § 1.97(b).

This information disclosure statement is filed either:

- (1) within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
- (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application;
- (3) before the mailing date of a first office action on the merits; or
- (4) before the mailing of a first office action after the filing of a Request for Continued Examination under 37 C.F.R. §1.114, whichever event occurs last.

Accordingly, this information disclosure statement requires no fee and no certification.



37 C.F.R. § 1.97(c).

This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing date of any of the following:

- (1) a final action under 37 C.F.R. § 1.113;
- (2) a notice of allowance under 37 C.F.R. § 1.311; or
- (3) an action that otherwise closes prosecution in the application.

Accordingly, this information disclosure statement requires either:

- (1) the fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c); or
- (2) a certification according to 37 C.F.R. § 1.97 (e)(1) or (2).



37 C.F.R. § 1.97(d).

This information disclosure statement is filed after the period specified in 37 C.F.R. § 1.97 (c).

Accordingly, this information disclosure statement requires:

- (1) a certification in accordance with 37 C.F.R. § 1.97(e); and
- (2) the fee specified in 37 C.F.R. § 1.17 (p) to consider an information disclosure statement under 37 C.F.R. § 1.97(d).

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If this statement crosses in the mail with an office action, or is otherwise not in the indicated category of 37 C.F.R. § 1.97, it is respectfully requested that this statement be treated in the next appropriate category and made of record. **To the extent required, please treat this paper as a conditional petition for acceptance of the information disclosure statement.**

II

Fees Due (CHECK ONE BOX):

- ☒ No fee is due.
- ☐ The fee specified in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c) or 37 C.F.R. § 1.97(d) is enclosed (\$180).

III

Certification (CHECK ONE BOX):

- ☒ No certification is necessary.
- ☐ Pursuant to 37 C.F.R. § 1.97(e)(1), the undersigned hereby certifies:
That each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- ☐ Pursuant to 37 C.F.R. § 1.97(e)(2), the undersigned hereby certifies:
No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this information disclosure statement.

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IV

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Please charge any additional required fee or credit any overpayment to our deposit account number 50-1698.

Respectfully submitted,
THELEN REID & PRIEST LLP



David B. Ritchie
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Dated: April 4, 2005

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Form PTO 1449 (Rev. 2-32)		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. IMMR-115A		Serial No. 09/927,416	
Information Disclosure Statement by Applicant				Applicant: Alex S. Goldenberg et al.			
(Use several sheets if necessary)				Filed: August 10, 2001		Group: 2838	
Foreign Documents							
Translation							
Init.		Document No.	Date	Country	Class	Subclass	Yes No
	A	H2-185278	07/19/1990	JP			X
	B	H4-8381	01/13/1992	JP			X
	C	H5-192449	08/03/1993	JP			X
	D	H7-24147	01/27/1995	JP			X
Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)							
	E	"Technical manual Overhaul Instructions with parts Breakdown, Coaxial Control Shaker Part No. C-25502", Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).					
	F	Scannell T., "Taking a Joystick Ride", Computer Currents, Boston Edition, Vol. 9, No. 11, November 1994.					
	G	Yamakita, M. et al., "Tele-Virtual Reality of Dynamic Mechanical Model", Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems, Raleigh, NC, July 7-10, 1992.					
	H	Noll, M., "Man-Machine Tactile", Reprinted from SID Journal, July/August 1972 Issue.					
	I	Rosenberg, L.B., "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance in Telepresence Tasks", Ph.D. Dissertation, Stanford University, August 1994.					
	J	Patrick, N., "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments", Master of Science Thesis, MIT, August 1990, archived Nov. 8, 1990.					
	K	Calder, B., "Design of a Force-Feedback Touch-Inducing Actuator for Teleoperator Robot Control", Bachelor of Science Thesis, MIT, May 1983, archived June 23, 1983.					
	L	Wiker, S., "Teletouch Display Development: Phase 1 Report", Technical Report 1230, Naval Ocean Systems Center, San Diego, July 1988.					
	M	Bliss, J. et al., "Optical-to-Tactile Image Conversion for the Blind", IEEE Transactions on Man-Machine Systems, Vol. MMS-11, No. 1, March 1970					
	N	Johnson, A., "Shape-Memory Alloy Tactile Feedback Actuator", Armstrong Aerospace Medical Research Laboratory, AAMRL-TR-90-039, August 1990.					
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	P	Aukstakalnis, S. et al., "Silicon Mirage: The Art and Science of Virtual Reality", ISBN 0-938151-82-7, pp. 129-180, 1992					
	Q	Eberhardt, S. et al., "Inducing Dynamic Haptic Perception by the Hand: System Description and Some Results", DSC-Vol. 55-1, Dynamic Systems and Control, Vol. 1, ASME, 1994.					
	R	Gobel, M. et al., "Tactile Feedback Applied to Computer Mice", International Journal of Human-Computer Interaction, Vol. 7, No. 1, pp. 1-24, 1995.					
	S	Pimental, K. et al., "Virtual Reality: Through the New Looking Glass", 2 nd Edition, McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.					
	T	"Cyberman Technical Specification", Logitech Cyberman Swift Supplemental to Logitech Mouse Technical Reference and Programming Guide, 4/5/1994.					
	U	Ouhyoung, M. et al., "The Development of a Low-Cost Force Feedback Joystick and Its Use in the Virtual Environment", Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95, Seoul, Korea, 21-24 August 1995.					
	V	Kaczmarek, K. et al., "Tactile Displays", Virtual Environments and Advanced Ingerface Design, Chapter 9, pp. 349-414, 1995.					
	W	Lake, L., "Cyberman from Logitech", printed from http://www.ibiblio.org/GamesBytes/issue21/greviews/cyberman.html , 1994					
	X	"Component Maintenance Manual with Illustrated Parts List, Coaxial Control Shaker, Part No. C25502", Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).					
Examiner					Date Considered		
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.							